$117 associated with HbA1c levls of 6%, 7%, 8% and 9% respectively. **CONCLUSIONS:** In insulin treated T2DM subjects lower HbA1c is associated with higher frequency of hypoglycaemia and associated costs. Failing to account for the cost burden associated with hypoglycaemia may underestimate the value of diabetes management strategies that minimize hypoglycaemia risk.

PDB33

COMPARATIVE ANALYSIS OF THE COST AND METABOLIC CONTROL IN DIABETIC CHILDREN USING INSULIN PUMPS

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OBJECTIVES: To assess the cost and metabolic outcomes in children with diabetes mellitus treated with CSII or with human insulin. **METHODS:** It is a cost-consequence analysis. Retrospectively were observed patients dossier and health care resources used during the period 1999 – 2012. The study sample included 34 children aged 3 to 18 years with type 1 diabetes. Seventeen of the children are using continuous subcutaneous insulin infusion (CSII) therapy and 17 using intensified dosage regime of human insulin. The duration of the disease, diabetic control, HbA1c deviation scores, height and weight were observed. Cost of pharmacotherapy, test strips were calculated and compared with the therapeutic outcomes in both studied groups. The average improvement of HbA (1c) after the CSII introduction was chosen as therapeutic outcome. **RESULTS:** Subcutaneous insulin infusion (CSII) systems are not a standard treatment for the Bulgarian children; they are of a limited usage and are not reimbursed. From the 34 children with diabetes type 1 observed 17 were on CSII (mean age 10 years, mean duration of diabetes - 7 years, average usage of CSII - 3 years). The test stripes costs 533 Euro/ year and their average cost according to the duration of the disease is 3779.45 Euro since diagnosis. The blood glucose monitoring system costs 20 Euro and for the duration of the disease - 4.96 Euro per patient per year. The CSII price is 3896 Euro and it costs 1292 euro per patient per year. The average improvement of HbA (1c) after the CSII introduction is 1.85. In the group treated while human insulin the average cost per children is 925 Euro and improvement of HbA (1c) human insulin is 0.28 for the same period. **CONCLUSIONS:** The treatment with CSII leads to significant improvement in glycemic control compared to the treatment with human insulin at the comparable costs.

PDB34

A COST ANALYSIS OF MEDICATION FOR PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) – HOW THIS VARIES ACCORDING TO BODY MASS INDEX (BMI) STATUS, AGE, GENDER AND CO-MORBIDITY

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OBJECTIVES: The rising prevalence of overweight and obesity has led to an increase in related metabolic disorders; most notably t2dm. We sought to determine how the cost of medication for this condition varies within a cohort of patients attending Galway University Hospital, according to age, gender, BMI and co-morbidity status. **METHODS:** We identified a subgroup of 185 adult type 2 diabetes patients attending our university hospital-based diabetes clinic, for whom detailed information about drug therapy and comorbidities (obesity, hypertension, dyslipidaemia) was available. We modelled the lifetime costs of medications for each patient, taking account of age, gender and comorbidity. The analysis compares the lifetime cost of medication of those patients who are obese relative to those who are overweight and of those with fewer to those with more co-morbidities; specifically obesity, hypertension and dyslipidaemia. **RESULTS:** We found that obesity is associated with a higher cost of medication relative to being overweight. Those with a BMI range of 35-39.9 had the highest mean cost of medication, costing on average €615 more than those who are overweight ($p < .01$). The highest cost of medication was associated with those aged 50-65- non-significant. Among those having all three co-morbidities compared to those having only t2dm there was a significant difference in the cost of medication costing on average an extra €418 ($p < .05$). **CONCLUSIONS:** These results suggest that the health economic costs associated with t2dm are differential with respect to the BMI status of affected individuals. These findings are of use in understanding the drug related burden of illness associated with obesity, t2dm and also the burden associated with being obese when one has t2dm compared to not being obese and having it. This study generated interesting data which will need to be replicated in larger prospective multicentre cohort studies.

PDB35

COST OF MICROVASCULAR AND MACROVASCULAR COMPLICATIONS IN PEOPLES WITH DIABETES TYPE 1 AND TYPE 2 IN BULGARIA

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OBJECTIVES: It has been shown that people with diabetes have a high prevalence of microvascular (neuropathy, nephropathy, retinopathy, diabetic angiopathy) and macrovascular (hypertension, stroke, myocardial infarction, heart failure and coronary artery disease) complications leading to hospitalizations. The objective of the present study is to evaluate the cost of hospitalizations due to micro- and macrovascular complications in an observed cohort of 433 patients with type 1 and 2 diabetes treated with insulin. **METHODS:** The evaluation is based on data from a 6 months combined retrospective and prospective observational study. People were separated in two groups depending on the type of diabetes and further into subgroups depending on the reason of hospitalization. The total costs for each subgroup of people were calculated and compared to the total costs of treatment for the observed period. **RESULTS:** In the group of people with type 2 diabetes (n=255) 128 people with complications were observed, whereas in people with type 1 diabetes it was only 70 people out of 178. The cost of hospitalizations in the type 2 diabetes group was in total 35 367 EUR for the people enrolled in the 6 months study with the following division of reported reasons: (general) diabetes- 43%, microvascular complications- 16%, and macrovascular complications- 41%. In the type 1 diabetes group the cost was equal to 15 364 EUR with the following split: 63% due to (general) diabetes, 19% due to microvascular complications, and 18% due to macrovascular complications. **CONCLUSIONS:** Type 2 diabetes is more costly than type 1 when hospitalizations occur. People with type 2 diabetes pay high cost for macrovascular complications than for microvascular probably due to high hypertension prevalence. The difference in costs between type 1 and 2 may result from different patients' characteristics.

PDB36

PHARMACOECONOMIC PECULIARITIES OF THYROID DISEASE TREATMENT IN UKRAINE

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OBJECTIVES: Due to the preparation for the transition to health insurance in Ukraine and because of the significant increase in thyroid disease it is important to assess a range of medicines included to the Ukrainian National Formulary (UNF). **METHODS:** It was compared the range of drugs for treatment of thyroid disease which are included to the Ukrainian National Formulary with the WHO Model list of Essential Medicines. Also it was calculated the annual cost of treatment by each medication considering the usual maintenance dose. **RESULTS:** In accordance to WHO Model List of Essential Medicines it was established that Ukrainian National Formulary includes thyroid hormones and antithyroid medicines for thyroid disease treatment such as: levothyroxine sodium and potassium iodide. Also it was found that there are no propylthiouracil medications in UNF. The dosage of levothyroxine sodium tablets satisfies the norms of World Health Organization, which are: 25 micrograms, 50 micrograms and 100 micrograms. Potassium iodide tablets in dose of 100 micrograms, 200 micrograms, 1 mg does not comply the norm. According to WHO Model list of Essential Medicines dosage of potassium iodide in tablets should be 60 mg. The cheapest annual cost of treatment by levothyroxine per patient is EUR 10,95 (The EUR/UAH conversion rate: 1 EUR = 10,52 UAH (Average 2013)), the most expensive is EUR 80,30. The most expensive annual cost of treatment by potassium iodide per patient is EUR 31,32, the cheapest is EUR 2,85. **CONCLUSIONS:** Propylthiouracil should be included to Ukrainian National Formulary. The cost difference of thyroid disease treatment by essential medicines caused by presence of foreign products in the pharmaceutical market of Ukraine.

PDB37

LOWER SHORT-TERM HEALTH CARE COST WITH THE ACCU-CHEK AVIVA EXPERT SYSTEM IN MULTIPLE DAILY INSULIN INJECTION (MDI) TREATED DIABETES PATIENTS - LEARNINGS FROM THE AUTOMATED BOLUS ADVISOR CONTROL AND USABILITY STUDY (ABACUS)

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OBJECTIVES: The randomized controlled ABACUS study assessed the impact of using the automated insulin bolus advisor within the Accu-Chek Aviva Expert system in combination with intensive diabetes therapy on glycemic control in patients treated with MDI therapy. This analysis assessed the potential incremental economic benefit of using this automated bolus advisor device on the short-term health care costs (SHC). **METHODS:** The study outcome parameter was "achieving the goal of an at least 0.5% reduction in HbA1c". The economic analysis was performed with a spreadsheet-model from a UK payer's direct cost perspective and based on ABACUS outcomes. Data on correlation between HbA1c change and expected cost are based on published literature. Model outputs include expected impact on SHC and sensitivity analysis. **RESULTS:** A total of 56% of patients in the intervention group (IG) achieved the goal, in the control group (CG) 34% respectively. Goal achievement led to an average HbA1c reduction of 1.2%, irrespective of group. There was no clinically relevant HbA1c effect in the remaining patients. Goal achievement correlates with an expected reduction in SHC of £189 per person / per year (PPY). The expected SHC reduction is £104 PPY in the IG and £74 PPY in the CG. The goal-achievement-rate increased by 63%, driving a comparative economic benefit of £30 PPY for an automated insulin bolus advisor supported approach. There were no significant differences in complications or in intervention cost. **CONCLUSIONS:** An MDI therapy in diabetes care that is supported by the Accu-Chek Aviva Expert systems with its automated bolus advisor leads to a 63% higher rate of goal achievement. This is expected to result in an incremental reduction in short-term health care costs of £30 PPY. Hence automated bolus calculation improved the cost-effectiveness of self-monitoring of blood glucose in this study population.

PDB38

FIRST RUSSIAN TYPE 2 DIABETES MELLITUS SIMULATION MODEL WITH DISCRETE EVENTS MODELING. HEALTH-ECONOMIC ANALYSIS

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OBJECTIVES: Type 2 diabetes mellitus (DM) is widely spread in Russia, counting about 10 million. New drugs are highly effective and carry a high cost for health care. The results of clinical trials are not enough to assess long term efficacy and safety of treatment. Modeling is a tool for making long term economic and outcome prognosis and comparing treatment strategies. The main goal of the presented study was to develop a predictive model of type 2 DM outcomes validated in Russian clinical conditions and to perform pharmacoeconomic evaluation of glucose lowering therapies. **METHODS:** Existing type 2 DM models were evaluated. Risk equations for type 2 DM complications were compiled from EAGLE and UKPDS DM models. Demographic (age, sex, height, weight, DM duration, smoking), biochemical (HbA1c, lipids) and clinical (blood pressure) patient parameters were used as inputs. Glucose lowering drug effectiveness was incorporated into